Pneumatosis Intestinalis, Mesenteric Venous Gas and Portal Venous Gas

Jeroen Heemskerk    Ignace H. de Hingh
Department of Surgery, Catharina Hospital, Eindhoven, The Netherlands

A 68-year-old male patient was treated in our hospital for rectal cancer by a low anterior resection. While recovering, he complained of sudden-onset abdominal pain on the 14th postoperative day. At physical examination the abdomen was tender, and laboratory findings showed elevated inflammatory parameters and metabolic acidosis. Since he progressively developed hypotension, tachycardia and dyspnea, a severe cause for his condition was suspected and an urgent contrast-enhanced abdominal CT scan was performed. This re-

Fig. 1. Gas in the intestinal wall of the ascending colon.

Fig. 2. Gas in the superior mesenteric vein.
vealed the presence of gas in the intestinal wall (pneumato-
matosis intestinalis) of the ascending colon (fig. 1), gas in
the superior mesenteric vein (fig. 2) and gas in the
portal system (fig. 3). At relaparotomy a necrotic ascen-
ding colon was found and resected, after which the
patient eventually recovered. Histological examination
of the resection specimen showed signs of severe isch-
emia and necrosis.

Hepatic portal venous gas in adults is a rare and po-
tentially severe radiological finding. If combined with
other radiological or clinical signs of intestinal ischemia,
such as pneumato
tosis intestinalis or severe sepsis, the
prognosis is dismal and urgent laparotomy is mandatory
[1]. However, nonischemic causes of hepatic portal ve-
nous gas such as inflammatory bowel disease, biliary in-
fec
tion or intra-abdominal abscesses can often be treated
conservatively [2, 3].

Fig. 3. Gas in the portal system.

References
1 Schindera ST, Triller J, Vock P, Hoppe H: De-
tection of hepatic portal venous gas: its clin-
ical impact and outcome. Emerg Radiol
2 Peloponissios N, Halkic N, Pugnale M, Jor-
nod P, Nordback P, Meyer A, Gillet M: He-
patic portal gas in adults: review of the lit-
erature and presentation of a consecutive
1370.
3 Hou SK, Chern CH, How CK, Chen JD,
Wang LM, Lee CH: Hepatic portal venous
gas: clinical significance of computed to-
mography findings. Am J Emerg Med 2004;